REMARKS

This Amendment is in response to the Office Action dated July 20, 2006. In the amendment, claims 18-20, 22 and 23 have been canceled without prejudice, claims 3, 5, 8, 10 and 11 have been amended, and claims 3-6, 8, 10, 11, 24-26, 28 and 29 remain pending in the application. Reconsideration of the pending claims in light of this amendment and the following remarks is respectfully requested.

These amendments add no new matter. A data distribution apparatus with a data switching means that selectively outputs playback data, special playback data and splicing data that is respectively transmitted to a data receiving terminal having a buffer, wherein the data switching means selectively outputs the splicing data when switching between the playback data and the special playback data so as to provide a continuity in the locus of used bits in a buffer of the data receiving terminal to prevent an overflow or underflow therein is variously described in Applicant's specification as filed. For example, a description of these features includes but is not necessarily limited to that in FIGs. 3-4, ¶¶[0064]-[0069] and ¶¶[0074]-[0079] of the published version of this application.

Claims 3-6, 8-11 and 18-29 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Pat. No. 5,828,370 to Moeller et al. ("Moeller") in view of U.S. Pat. No. 6,658,199 to Hallberg ("Hallberg"), and further in view of U.S. Pat. No. 6,445,738 to Zdepski ("Zdepski"). This rejection is traversed.

Independent claim 3 now recites: *[a] data distribution apparatus comprising:*

receiving means for receiving a request signal from an external source;

data storage means for storing playback data and splicing data;

data switching means for selectively outputting the playback data, special playback data and the splicing data; and

transmission means for transmitting the playback data, the special playback data or the splicing data from said data switching means to a data receiving terminal via a transmission medium,

wherein the data switching means generates the special playback data by reading selected playback data from said data storage means in response to a type of special playback,

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decoding the selected playback data, and encoding the decoded special playback data when the request signal indicates the special playback, and

wherein the data switching means selectively outputs the splicing data from said data storage means when switching between the playback data and the special playback data so as to provide a continuity in the locus of used bits in a buffer of a data receiving terminal to prevent an overflow or an underflow in the buffer of the data receiving terminal.

These claimed features are not disclosed or suggested by Moeller, Hallberg, or Zdepski, whether taken individually or in any combination.

Moeller discloses a system and method for displaying a graphical icon on a display screen. A user manipulates a cursor within a slider bar using a remote control. The set top box receives and processes the signals and provides the information resulting from the user's action to a video server that delivers compressed video streams as dictated by the user's manipulation of the cursor. The sliding of the cursor allows the user to quickly move to another location in the video stream, and the normal playback is resumed accordingly based upon user input.

The Examiner contends that Moeller discloses "splicing data" as claimed by Applicant. Applicant respectfully disagrees with this characterization of the reference. Specifically, the Examiner has alleged that the index table (or, presumably, data therein) discloses Applicant's claimed splicing data. (Office Action, at p. 3, citing Mueller, at 9:15-20 and 11:17-37). With Applicant's claimed invention, the data switching means selectively outputs the playback, special playback and splicing data in response to special request signals, and also "transmit[s] the playback data, the special playback data or the splicing data from said data switching means to a data receiving terminal" accordingly. These features are clearly in contrast to and distinct from the index table disclosed by Moeller. In Moeller, the index table is merely used to index locations so as to respond to the above-described cursor manipulations. That is, the media server receives input based upon slider bar operation, determines a new normal play time based upon the received input, indexes to a new position in the normal play stream based on the determined normal play time, and then outputs the normal play stream at the indexed location. This is quite clearly distinct from Applicant's claimed splicing data, which is actually output in a selective fashion and which is actually transmitted to the data receiving terminal as the data to be played by the data receiving terminal. There is no disclosure nor is there any suggestion of this type of

splicing data in Moeller, as the index data is merely used as a locator by the media server to accommodate proper indexing of the normal stream that is sent to the receiving terminal.

Accordingly, while Applicant concurs with the Examiner's conclusion that Moeller does not disclose Applicant's claimed prevention of buffer overflow and underflow (as well as selectively outputting the three types of data so as to ensure continuity in the locus of used bits in the buffer of the receiving terminal), Applicant respectfully submits that the deficiencies of Moeller extend beyond those presented in the Examiner's characterization of the reference.

Hallberg does not remedy the deficiencies of Moeller.

Hallberg accommodates smooth trick play by reducing the number of frames in the trick play GOP until the system is capable of transmitting the trick play GOP within the constraints imposed for processing MPEG video in the forward mode at standard speed. (Hallberg, at 6:58-7:25). Hallberg merely teaches a reduction in the number of frames in the trick play mode to ensure that processing can be accommodated according to the standard mode constraints. Thus, Hallberg also clearly fails to disclose switching between playback data, special playback data, and splicing data, as well as features related thereto, including but not limited to *selectively outputting the splicing data from said data storage means when switching between the playback data and the special playback data so as to provide a continuity in the locus of used bits in a buffer of a data receiving terminal to prevent an overflow or an underflow in the buffer of the data receiving terminal*, as claimed.

Moreover, Applicant submits that the combination of Moeller and Hallberg still fails to disclose or suggest the claimed splicing data. As described above, the index data of Moeller is not splicing data as claimed, and is not selectively output to the receiving terminal in the fashion claimed by Applicant. Hallberg offers nothing in this regard, and as such the combination of references clearly fails to disclose or suggest Applicant's claimed invention in that regard.

Zdepski does not remedy the deficiencies of Moeller and Hallberg. Zpepski discloses techniques for creating trick play video streams from a compressed normal play video bitstream. There is no mention of splicing data even generally, nor therefore is there any mention of selectively outputting the splicing data, playback data and special playback data, and of course no mention of providing such selective output *so as to provide a continuity in the locus of used bits in a buffer of a data receiving terminal to prevent an overflow or an underflow in the buffer*

of the data receiving terminal, as claimed by Applicant. Thus, Zdepski also fails to disclose or suggest in any way the claimed features that are absent from Moeller and Hallberg.

Since even a combination of Moeller, Hallberg, and Zdepski would still fail to disclose features that are recited in Applicant's independent claim 3, Applicant maintains that the Examiner has not presented a *prima facie* case of obviousness for that claim.

Furthermore, there is not and would not be any motivation to combine these various references in the proposed fashion. Moeller essentially discloses a slider bar control, makes no mention of the type of splicing data claimed by Applicant, and offers no disclosure whatsoever as to buffer over and underflow in connection with the disclosed "index data". Hallberg discloses a trick play frame reduction technique, but also has no mention of switching between playback, special and splicing data. Hallberg instead discloses techniques for inserting local content into program content, techniques that are clearly distinct from and have no bearing upon Applicant's claimed invention. Finally, Zdepski discloses techniques for creating an encoded stream, and again offers no disclosure or suggestion regarding the insertion of splicing data, or doing so according to the particular constraints as claimed by Applicant. None of the references disclose the above-described features of Applicant's claimed invention, and any proposed combination of these disparate references and teachings would clearly be an attempt to reconstruct Applicant's claimed invention in hindsight.

For reasons similar to those provided regarding claim 3 above, independent claims 5, 8, 10 and 11 are also neither disclosed nor suggested by the relied-upon references. The dependent claims are also not disclosed or suggested by the relied-upon references, for their incorporation of the features recited in the respective independent claims, as well as their own separately recited, patentably distinct features.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection of the claims under 35 U.S.C. § 103(a), as being unpatentable over Moeller in view of Hallberg, and Zdepski.

Claims 18-20 and 21-23 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Moeller in view of Hallberg and Zdepski, and further in view of U.S. Pat. No. 6,029,045 to Picco ("Picco"). This rejection is traversed.

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As described previously, Moeller, Hallberg and Zdepski, even in combination, fail to disclose or suggest various features of Applicant's claimed invention, including *"selectively outputting the playback data, special playback data and the splicing data"* ... *" wherein the data switching means selectively outputs the splicing data from said data storage means when switching between the playback data and the special playback data so as to provide a continuity in the locus of used bits in a buffer of a data receiving terminal to prevent an overflow or an underflow in the buffer of the data receiving terminal."*

Picco does not remedy the deficiencies of Moeller, Hallberg and Zdepski. Picco discloses a technique that allows a broadcaster to insert local content into programming content, so that the broadcaster can provide targeted content to its users. (See, *e.g.*, Picco at 2:49-58). A splicer is used to introduce the local content into the program content stream. To accommodate splicing, some reformatting of the stream is used. Specifically, the image frame immediately before and after the insertion point of the local content is formatted as an intra-coded "I" frame. (Picco, at 11:49-62). This avoids a destruction of the predictive encoding. (Picco, at 12:1-3).

Accordingly, Picco discloses a system where local content is inserted into the programming content, and wherein splicing performs some reformatting to accommodate predictive encoding. There is no switching between playback data, special playback data and splicing data as claimed by Applicant. There is also no *"selectively output[ing] the splicing data from said data storage means when switching between the playback data and the special playback data so as to provide a continuity in the locus of used bits in a buffer of a data receiving terminal to prevent an overflow or an underflow in the buffer of the data receiving terminal"* as claimed by Applicant.

With Applicant's claimed invention, there is switching between playback data, special playback data that is encoded from the playback data based upon the type of special playback, and splicing data. Moeller, Hallberg, and Zdepski each fail to disclose or suggest such features. The disclosure by Picco of a clearly different splicing technique that is applied to data that is also clearly different from the type of data claimed by Applicant clearly offers no disclosure or suggestion of Applicant's claimed invention, and thus the deficiencies of the first three referenced are not remedied in any way by Picco.
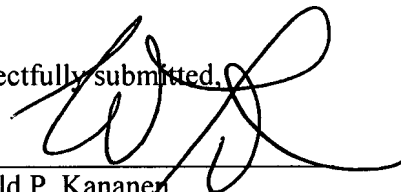
It is also noted that Picco makes only a general reference that the splicer "may also maintain the buffer flows, as described below." (Picco, at 11:62-63). However, Picco never actually describes how the splicer would maintain buffer flows. Since Picco does not disclose splicing as claimed by Applicant (selectively outputting playback, special playback and splicing data), it cannot possibly be construed as disclosing conducting such "splicing" *so as to provide a continuity in the locus of used bits in a buffer of a data receiving terminal to prevent an overflow or an underflow in the buffer of the data receiving terminal*, particularly in light of the absence of any detail as to how buffer flow is maintained even in the different situation (reformatting) that is actually disclosed by Picco.

Picco thus clearly also fails to disclose or suggest the features of Applicant's claimed invention.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection of the claims under 35 U.S.C. § 103(a), as being unpatentable over Moeller in view of Hallberg, Zdepski, and Picco.

For the foregoing reasons, reconsideration and allowance of the claims that remain in this application are solicited. If any further issues remain, the Examiner is invited to telephone the undersigned to resolve them.

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Respectfully submitted,

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